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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/021,161	12/13/2001	Paul S. Lugg	56304US002	1351
32692	7590	11/17/2003	EXAMINER	
3M INNOVATIVE PROPERTIES COMPANY			CHEVALIER, ALICIA ANN	
PO BOX 33427			ART UNIT	
ST. PAUL, MN 55133-3427			PAPER NUMBER	
			1772	

DATE MAILED: 11/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/021,161

Applicant(s)

LUGG, PAUL S.

Examiner

Alicia Chevalier

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 23-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 23-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

RESPONSE TO AMENDMENT

Drawings

1. The drawings were received on August 28, 2003. These drawings are acceptable.

REJECTIONS REPEATED

2. The 35 U.S.C. §102 rejection of claims 23-27 as anticipated by Piper et al. (5,152,917) is repeated for reasons previously of record in paper #5, pages 2-3, paragraph #2.

Pieper discloses an abrasive article comprising a polishing layer have a textured surface comprising a binder and a second surface opposite the textured surface and a backing having a first backing surface, the first backing surface associated with the second surface of the polishing layer, which is arranged in an ordered profile. The profile comprises grooves (first and second channels) through the polishing layer and into the backing layer. The more consistent an abrasive article of the invention, the more consistent will be the finish imparted by the abrasive to the work piece. An abrasive article having an ordered profile has a high level of consistency, since the height of the peaks of the abrasive composites will normally not vary more than 10%. See figures 1 and 3 and col. 7 lines 16-20, 63-68 and col. 8, lines 16-48. The textured surface comprises precisely shaped abrasive composites fixed in a binder. The groove (1st and 2nd channel) is dimensioned with respect to one another such that the textured surface of the polishing layer is outside of a line of sight by less than 0.5 mm (col. 8, lines 34-48).

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3. The 35 U.S.C. §103 rejection of claims 23-33 and 26-40 over Rutherford et al (5,92,950) in view of Piper et al. (5,152,917) is repeated for reasons previously of record in paper #5, pages 3-5, paragraph #4.

Rutherford discloses an abrasive article comprising a polishing layer have a textured surface comprising a binder and a second surface opposite the textured surface and a backing having a first backing surface, the first backing surface associated with the second surface of the polishing layer. The textured surface comprises precisely shaped abrasive composites fixed in a binder. The backing further comprises a first backing layer of polycarbonate, a second backing layer of a foamed polymeric material, and a third backing layer of polycarbonate. See the figure and col. 7, line 52 to col. 8, line 44.

Rutherford discloses all the limitations of the instant claimed invention except for a 1st channel in the polishing layer with a corresponding 2nd channel in the backing.

Pieper discloses an abrasive article comprising a polishing layer and a backing layer, which arranged in an ordered profile. The profile comprises grooves (first and second channels) through the polishing layer and into the backing layer. The more consistent an abrasive article of the invention, the more consistent will be the finish imparted by the abrasive to the work piece. An abrasive article having an ordered profile has a high level of consistency, since the height of the peaks of the abrasive composites will normally not vary more than 10%. See figures 1 and 3 and col. 7 lines 16-20, 63-68 and col. 8, lines 16-48. The groove (1st and 2nd channel) is dimensioned with respect to one another such that the textured surface of the polishing layer is outside of a line of sight by less than 0.5 mm (col. 8, lines 34-48).

It would have been obvious to one of ordinary skill in the art to impart an ordered profile (first and second channels) in the abrasive article of Rutherford as taught by Pieper because the ordered profile would provide a higher level of consistency to the article.

Pieper also discloses several different shapes and configurations of the profile, see figure 3-9. It is well settled that a particular shape of a prior invention carries no patentable weight unless the applicant can demonstrate that the new shape provides significant unforeseen improvements to the invention. See *In re Seid*, 161 F.2d 229, 73 USPQ 431 (CCPA 1947) (Claim was directed to an advertising display device comprising a bottle and a hollow member in the shape of a human figure from the waist up which was adapted to fit over and cover the neck of the bottle, wherein the hollow member and the bottle together give the impression of a human body. Appellant argued that certain limitations in the upper part of the body, including the arrangement of the arms, were not taught by the prior art. The court found that matters relating to ornamentation only which have no mechanical function cannot be relied upon to patentably distinguish the claimed invention from the prior art.) Also, see *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966) (the court held that the configuration of the claimed disposable plastic nursing container was a matter of choice which a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration of the claimed container was significant.) In the instant case, the application does not indicate any new, significant attributes of the invention due to its shape which would have been unforeseen to one of ordinary skill in the art.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to change the shape and/or configuration of the grooves/channels. One skilled in the

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art would have been motivated to do so in order to optimize the consistency of the abrasive article.

4. The 35 U.S.C. §103 rejection of claims 34, 35, 41 and 42 over Rutherford et al (5,92,950) in view of Piper et al. (5,152,917) and further in view of Barber, Jr. (6,179,887) is repeated for reasons previously of record in paper #5, pages 5-6, paragraph #5.

Rutherford and Pieper disclose all the limitations of the instant invention except for the grooves containing holes.

Barber discloses an abrasive article, which comprises through holes for mounting the article onto an assembly for use (col. 15, lines 9-18).

It would have been obvious to one of ordinary skill in the art at the time of the invention to add holes to the grooves in Rutherford because it would allow the abrasive article of Rutherford to be mounted.

It is well settled that a particular shape of a prior invention carries no patentable weight unless the applicant can demonstrate that the new shape provides significant unforeseen improvements to the invention. See *In re Seid*, 161 F.2d 229, 73 USPQ 431 (CCPA 1947) (Claim was directed to an advertising display device comprising a bottle and a hollow member in the shape of a human figure from the waist up which was adapted to fit over and cover the neck of the bottle, wherein the hollow member and the bottle together give the impression of a human body. Appellant argued that certain limitations in the upper part of the body, including the arrangement of the arms, were not taught by the prior art. The court found that matters relating to ornamentation only which have no mechanical function cannot be relied upon to patentably distinguish the claimed invention from the prior art.) Also, see *In re Dailey*, 357 F.2d 669, 149

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USPQ 47 (CCPA 1966) (the court held that the configuration of the claimed disposable plastic nursing container was a matter of choice which a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration of the claimed container was significant.) In the instant case, the application does not indicate any new, significant attributes of the invention due to its shape which would have been unforeseen to one of ordinary skill in the art.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to change the shape and/or configuration of the holes. One skilled in the art would have been motivated to do so in order to accommodate the fastening mechanism.

ANSWERS TO APPLICANT'S ARGUMENTS

5. Applicant's arguments filed in paper #7 regarding the 35 U.S.C. §102 rejection of Piper et al. (5,152,917) of record have been carefully considered but are deemed unpersuasive.

Applicant argues that Pieper fails to teach a backing comprising a channel extending through the backing from the first backing surface to the second backing surface, specifically the present invention requires a line of sight, i.e. an opening with a line of sight through the backing and through the abrasive.

The limitation in claim 23 "a second channel ... extending through the backing from the first backing surface to the second backing surface" does not require the channel to be a through hole. This particular limitation given its "broadest reasonable interpretation" does not require the channel to form an opening, i.e. a through hole. The limitation in its broadest reasonable

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interpretation also encompasses grooves extending from the first backing surface to the second backing surface, but not completely penetrating the second backing surface, as shown in Pieper.

Furthermore, in regard to the line of sight, the claim recites “the first channel and the second channel being dimensioned with respect to one another such that the textured surface of the polishing layer is out of a line of sight.” The claim merely requires that the polishing layer is out of “a line of sight” and does not require a line of sight through an opening in the backing and through the abrasive. Therefore, since Pieper discloses the backing is completely solid (no openings), the textured surface of the polishing layer is out of “a line of sight,” when the line of sight is from the backing side.

Applicant further argues that the orientation of the channels allow material deposition onto the work piece, whereas, the Patent Office has not shown any such feature or possibility in Pieper. The limitations on which Applicant relies (i.e. the orientation of the channels allow material deposition onto the work piece) are not stated in the claims. It is the claims that define the claimed invention, and it is claims, not specifications that are anticipated or unpatentable.

6. Applicant’s arguments filed in paper #7 regarding the 35 U.S.C. §103 rejection over Rutherford et al (5,92,950) in view of Piper et al. (5,152,917) of record have been carefully considered but are deemed unpersuasive.

Applicant argues that Rutherford fails to correct the previously discussed deficiencies of Pieper. The supposed deficiencies of Pieper have already been addressed above.

7. Applicant’s arguments filed in paper #7 regarding the 35 U.S.C. §103 rejection over Rutherford et al (5,92,950) in view of Piper et al. (5,152,917) and further in view of Barber, Jr. (6,179,887) of record have been carefully considered but are deemed unpersuasive.

Applicant arguments regarding the supposed deficiencies of Pieper have already been addressed above.

Applicant further argues that if the mounting holes of Barber were added to Rutherford it would not provide a line of sight as required in the present invention. As stated above, the claim merely requires that the polishing layer is out of "a line of sight" and does not require a line of sight through an opening in the backing and through the abrasive. Therefore, it would not defeat the purpose of the holes in Barber and the Patent Office's proffered motivation to combine the references.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia Chevalier whose telephone number is (703) 305-1139.

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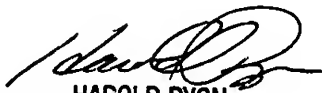
The Examiner can normally be reached on Monday through Thursday from 8:00 a.m. to 5:00 p.m. The Examiner can also be reached on alternate Fridays

If attempts to reach the Examiner are unsuccessful, the Examiner's supervisor, Harold Pyon can be reached by dialing (703) 308-4251. The fax phone number for the organization official non-final papers is (703) 872-9306. The fax number for after final papers is (703) 872-9311.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose phone number is (703) 308-0661.

ac

11/6/03

A handwritten signature in black ink, appearing to be 'AC', written over the date 11/6/03.A handwritten signature in black ink, appearing to be 'Harold Pyon', written above the printed name and title.

HAROLD PYON
SUPERVISORY PATENT EXAMINER
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11/10/03